

Title (en)
ROTATING SHAFT DEVICE

Title (de)
VORRICHTUNG MIT DREHENDER WELLE

Title (fr)
DISPOSITIF D'ARBRE ROTATIF

Publication
EP 1418352 A4 20070214 (EN)

Application
EP 02755906 A 20020809

Priority

- JP 0208199 W 20020809
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- JP 2001245696 A 20010813

Abstract (en)
[origin: US2004013335A1] A shaft 17 defines a front end portion 17a having a larger diameter and an opposite tail end portion 17b having a smaller diameter, the shaft 17 being rotatably supported by the housing 13 through a radial bearing 19 and a pair of angular ball bearings 21 at the front side large diameter portion 17a and the small diameter portion 17b, respectively.

IPC 1-7
F16C 19/54; **F16C 37/00**; **F16C 41/00**; **B23Q 11/12**; **B23Q 11/14**

IPC 8 full level
B23B 19/02 (2006.01); **B23Q 1/40** (2006.01); **B23Q 1/70** (2006.01); **B23Q 11/12** (2006.01); **F16C 19/54** (2006.01); **F16C 37/00** (2006.01); **H02K 5/173** (2006.01); **H02K 7/08** (2006.01)

CPC (source: EP US)
B23Q 1/40 (2013.01 - EP US); **B23Q 1/70** (2013.01 - EP US); **B23Q 11/127** (2013.01 - EP US); **F16C 19/525** (2013.01 - EP US); **F16C 19/54** (2013.01 - EP US); **F16C 25/08** (2013.01 - EP US); **F16C 37/007** (2013.01 - EP US); **H02K 5/1732** (2013.01 - EP US); **H02K 5/1737** (2013.01 - EP US); **H02K 7/083** (2013.01 - EP US); **F16C 2322/39** (2013.01 - EP US); **Y10S 384/90** (2013.01 - EP US); **Y10T 409/303976** (2015.01 - EP US); **Y10T 409/309352** (2015.01 - EP US)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 03016733A1

Cited by
DE102007029571B4; EP1992829B2

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
US 2004013335 A1 20040122; **US 6913390 B2 20050705**; DE 60226148 D1 20080529; DE 60226148 T2 20090702; EP 1418352 A1 20040512; EP 1418352 A4 20070214; EP 1418352 B1 20080416; WO 03016733 A1 20030227

DOCDB simple family (application)
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